DIALOG(R)File 351:Derwent WPI (c) 2002 Thomson Derwent. All rts. reserv. 008355111 **Image available** WPI ACC No: 1990-242112/199032 XRAM ACC NO: C90-104657 XRPX ACC NO: N90-187807 Negatively chargeable toner for electrophotography - contg. charge controlling resin formed by copolymerising sulphonic gp. contg. acryl amide monomer with polyvinyl monomer e.g. polystyrene etc. Patent Assignee: MINOLTA CAMERA KK (MIOC) Number of Countries: 001 Number of Patents: 002 Patent Family: Date Patent No Kind Date Applicat No Kind Week 19900627 19880512 199032 JP 2167565 JP 88115436 Α Α JP 88115436 В2 19970625 JP 2623684 19880512 199730 Priority Applications (No Type Date): JP 88115436 A 19880512 Patent Details: Patent No Kind Lan Pg Main IPC Filing Notes 8 G03G-009/097 Previous Publ. patent JP 2167565 JP 2623684 В2 Abstract (Basic): JP 2167565 A Toner comprises at least thermoplastic resin, colourant and charge controlling agent contains a charge controlling resin (CCR) of formula (I) which is formed by copolymerisation between sulphonic gp. contg. acryl amide monomer, of which amt. of 1-20 wt% of the total components, and a vinyl monomer selected from styrene, acrylic ester, methacrylic ester, ester and their mixt., where amt. of CCR is 0.1-10 pts. wt. and amt. of charge controlling agent (CCA) other than CCR is 0.1-10 pts. wt. based on $1\overline{0}0$ pts. of thermoplastic resin (where R1 = H or methyl; R2, R3 = H or 1-10c alkyl; m = integer 1-10).

USE/ADVANTAGE - The toner is charged quickly and its performance is stabilised giving copies of high density image and less fog. It is partic. favoured for a high speed (eg greater than 40 cm/sec) copier as it splashes less and causes less offsetting. Dwg.0/0Title Terms: NEGATIVE; CHARGE; TONER; ELECTROPHOTOGRAPHIC; CONTAIN; CHARGE; CONTROL; RESIN; FORMING; COPOLYMERISE; SULPHONIC; GROUP; CONTAIN; ACRYL; AMIDE; MONOMER; POLYVINYL; MONOMER; POLYSTYRENE Derwent Class: A14; A89; G08; P84; S06 International Patent Class (Main): G03G-009/097 International Patent Class (Additional): G03G-009/09 File Segment: CPI; EPI; EngPI Manual Codes (CPI/A-N): A04-A; A04-C04; A04-D04A1; A04-F06E4; A12-L05C2; Manual Codes (EPI/S-X): S06-A04C1 Plasdoc Codes (KS): 0037 0203 0218 0231 0304 0306 3152 0495 0502 0642 2585 2806 2808 Polymer Fragment Codes (PF): *Ó01* 014 034 04- 040 05- 055 056 074 075 076 077 079 081 086 27& 546 575

583 589 59& 609 658 659 688 725